CLAIMS

We claim:

1. A method for enhancing an immune response in a patient having a disease or condition, comprising administering to the patient a composition comprising a non-specific xenotypic antibody, wherein the xenotypic antibody does not specifically bind to an antigen associated with the disease or condition, whereby an immune response is enhanced.

2. The method of claim 1, further comprising administering to the patient a second composition comprising a specific xenotypic antibody that specifically binds to the antigen associated with the disease or condition.

3. The method of claim 2, wherein the non-specific xenotypic antibody enhances the immune response generated by the specific xenotypic antibody.

4. The method of any one of claims 1, 2, and 3, wherein administration of the non-specific xenotypic antibody composition elicits a host anti-xenotypic antibody (HAXA) response in the patient.

5. The method of claim 1, wherein the patient is a human.

6. The method of claim 1, wherein the non-specific xenotypic antibody is a murine antibody.

7. The method of claim 2, wherein the specific xenotypic antibody is a murine antibody.

8. The method of claim 6 or 7, wherein the specific murine antibody elicits a host anti-murine antibody (HAMA) response.

9. The method of claim 1, wherein administration of the non-specific xenotypic antibody increases presentation of an antigen associated with the disease or condition by an antigen-presenting cell.

10. The method of claim 3, wherein administration of the non-specific xenotypic antibody enhances an antigen-specific immune response in the patient.

11. The method of claim 10, wherein the antigen-specific immune response comprises generation of a T cell that specifically recognizes the antigen after administration of the composition.

12. The method of claim 11, wherein the T cell is a CD4+ T cell.

13. The method of claim 11, wherein the T cell is a CD8+ T cell.

14. The method of claim 1, wherein the non-specific xenotypic antibody composition further comprises a pharmaceutically acceptable carrier.

15. The method of claim 2, wherein the specific xenotypic antibody composition further comprises a pharmaceutically acceptable carrier.

16. The method of claim 1, wherein the non-specific xenotypic composition is administered in a dosage of from about 0.1 μg to about 2 mg of the xenotypic antibody per kilogram of body weight of the patient.

17. The method of claim 1 or 2, wherein the non-specific xenotypic antibody is a monoclonal antibody.

18. The method of claim 1 or 2, wherein the non-specific xenotypic antibody is a polyclonal antibody.

19. The method of claim 2, wherein the non-specific and the specific xenotypic antibodies are from the same species of animal.

20. The method of claim 2, wherein the non-specific xenotypic antibody composition is administered to the patient prior to the specific xenotypic antibody composition.

21. The method of claim 20, wherein the non-specific xenotypic antibody composition is administered to the patient one week prior to the specific xenotypic antibody composition.

22. The method of claim 20, wherein the non-specific xenotypic antibody composition is administered to the patient one month prior to the specific xenotypic antibody composition.

23. The method of claim 2, wherein the specific xenotypic antibody composition is administered to the patient prior to the non-specific xenotypic antibody composition.

24. The method of claim 23, wherein the specific xenotypic antibody composition is administered to the patient one week prior to the non-specific xenotypic antibody composition.

25. The method of claim 23, wherein the specific xenotypic antibody composition is administered to the patient one month prior to the non-specific xenotypic antibody composition.

26. The method of claim 2, wherein the non-specific xenotypic antibody composition and the specific xenotypic antibody composition are co-administered to the patient.

27. The method of claim 26, wherein the co-administration is in a single formulation.

28. The method of claim 26, wherein the co-administration is in two formulations.

29. The method of claim 10, wherein the specific antibody elicits an antigen-specific immune response comprising either a B cell with surface bound immunoglobulin that specifically binds to the antigen after administration of the composition, or an antibody that specifically binds to the antigen after administration of the composition.

30. The method of claim 10, wherein the antigen-specific immune response comprises generating T cells that specifically recognize the antigen after administration of the composition.

31. The use of a non-specific xenotypic antibody as an adjuvant, wherein the non-specific antibody is not immunoreactive with an antigen for which an immunogenic response is desired.

32. The use of a non-specific xenotypic antibody in the formulation of a medicament for use as an adjuvant, wherein the non-specific antibody is not immunoreactive with an antigen for which an immunogenic response is desired.

33. A kit comprising the non-specific xenotypic antibody of claim 1 labeled for use as an adjuvant.

34. The kit of claim 33, further comprising the specific antibody of claim 2.

35. The method of claim 1, wherein enhancement of the immune response allows for an enhanced response against a disease-associated antigen.

36. A vaccine formulation including one or more antigens for which vaccination is desired and at least one xenotypic antibody not cross-reactive with the antigens of the vaccine, wherein the xenotypic antibody is provided in an amount to act as an adjuvant.

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